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| 10/590,824 | 08/25/2006 | Rene De Clerk | DeCLERCK-3 | 1159 |
| 1444 | 7590 | 02/17/2010 | EXAMINER | |
| BROWDY AND NEIMARK, P.L.L.C. | | | EIDE, HEIDI MARIE | |
| 624 NINTH STREET, NW | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|--------------------------------------|---------------------------------------|
| Office Action Summary | Application No. 10/590,824 | Applicant(s) DE CLERK, RENE |
| | Examiner HEIDI M. EIDE | Art Unit 3732 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 November 2009.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-10,15 and 17-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-10,15 and 17-21 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/06)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 21, 2009 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-6, 8-10 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. (4,349,498) in view of McCrory et al. (6,333,971).

Ellis teaches a method to determine the position of a dental implant which is fixed in the bone of the jaw of a person composing the steps of fixing at least one marker element which produces a strong contrast in imaging techniques to a free end of the implant, whereby the marker element is situated at a distance from the free end, generating an image of the jaw by means of x-rays wherein the jaw contains the implant with the marker element, determining the position of the marker element in relation to the jaw on the basis of the image which is formed by the x-ray and identifying the

position of the implant form the observed position of the marker element (col. 7, ll. 44-51). Ellis teaches the invention as substantially claimed and discussed above, however, does not specifically teach attaching the marker element to the implant in a detachable manner.

McCrory teaches attaching the marker element to the implant in a detachable manner (fig. 1A, see abstract). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify means of attachment taught by Ellis with the detachable means taught by McCrory as a matter of obvious design choice since McCrory teaches a permanent attachment and detachable attachment of the marker element (see abstract).

Ellis further teaches the marker element contains tantalum (col. 3, ll. 40-41). Ellis teaches the invention as substantially claimed and discussed above, however, does not specifically teach the marker is a spherical marker, fixing a support with the marker element to the implant in a detachable manner and fixing the support with the marker element to the free end of the implant such that this support extend in the prolongation of the implant and the marker element is situated at a distance for the free end, wherein the implant has a central axis defined by a line through the center of the marker and the method of determining the orientation and position of the central axis as claimed in claim 5 and wherein the imaging means is computer tomography and wherein the support is made of a material which is transparent to x-rays.

McCrory teaches the marker element is a spherical marker (col. 5, ll. 39-43). It would have been obvious to one having ordinary skill in the art at the time of the

invention to modify shape of the marker element taught by Ellis with the spherical shape taught by McCrory in order to find easily find the centroid. Furthermore it would have been an obvious matter of design choice to change the shape of the marker since it has been held that such a modification involves routine skill in the art (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) MPEP 2144.04 VI B). McCrory further teaches the imaging means is computer tomography (see abstract), the support is made of a material which is transparent to x-rays, fixing a support with the marker element to the implant in a detachable manner and fixing the support with the marker element to the free end of the implant such that this support extend in the prolongation of the implant and the marker element is situated at a distance for the free end (fig. 1A). McCrory further teaches the implant has a central axis, the orientation and position of the central axis being determined by defining a straight line through a center point of the marker element which is parallel to a longitudinal side of the formed image of the support (fig. 1A). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify means of attachment means of the marker taught by Ellis with the detachable attachment means taught by McCrory as a matter of obvious design choice since McCrory teaches a permanent attachment and a detachable attachment including a support of the marker element (see abstract). As to claims 5-6, McCrory does not specifically teach the method comprising the step of determining the orientation and position of the central axis of the implant by defining the center of gravity of pixels representing the implant or the support in the image as well as the center of gravity of the image of the marker element and determining the position of the implant in relation

to the jaw on the basis of the orientation and the position of the axis of the implant and the distance between the marker element and the free end of the implant, however, it would have been obvious to one having ordinary skill in the art at the time of the invention to use any known mathematical method in determining the orientation and position the central axis of the implant and the position of the implant in relation to the jaw.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. (4,349,498) in view of McCrory et al. (6,333,971) as applied to claim 1 above, and further in view of Hattori (5,989,258).

Ellis/McCrory teaches the invention as substantially claimed and discussed above, however, does not specifically teach a second marker element is fixed in relation to the implant with a center portion which is not situated on the central axis of the implant wherein the basis of the observed position of the second marker elements, the angular position of the implant in relation to the central axis is determined.

Hattori teaches multiple markers 57 fixed in relation to the implant with a center point in which is not situated on the central axis of the implant wherein on the basis of the observed position of the second marker element, the angular position of the implant in relation to the central axis is determined and the support is made of a material which is transparent to x-rays as illustrated in fig. 8 (col. 5, II. 21-27, col. 7, II. 5-13). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the marker of Ellis/McCrory with the multiple markers of Hattori in order to

provide more references for determining the position of the implant. Furthermore, it has been held the mere duplication of the essential working parts of a device involves only routine skill in the art (In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) MPEP 2144.04 VI B).

Claims 15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sala Meseguer (6,093,023).

Sala teaches a support (35/38) with a marker element (36) capable of determining a position of a dental implant which is fixed to the jaw of a person, in relation to the jaw, wherein the marker elements is capable of producing a strong contrast in an image generated by x-rays or magnetic resonance, wherein the support has means at one far end to be fixed to the implant (fig. 17) in a detachable manner, whereas the other far end of the support comprises the marker element (fig. 17), wherein the means for fixing the support to the implant comprises a securing pin (fig. 17) and wherein the support comprises a sleeve (fig. 16) with a protrusion (22) whose dimensions correspond practically to those of a recess provided in a head of the implant on which this support must be fixed (fig. 18, portion below element 23), such that the protrusion can be placed in a practically fitting manner in said recess (fig. 18), wherein the sleeve presents a second marker element (the marker being protrusions on the side of sleeve). Sala teaches the invention as substantially claimed and discussed above, however, does not specifically teach the marker element produces a strong contrast

compared to the implant itself and wherein the marker element contains at least one of the metals from the group formed of tantalum, platinum and tungsten. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to make the marker element out of any known material used in the art since it has been held within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (*In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) MPEP 2144.07). Sala further teaches the support wherein the securing pin is coaxial to the support and is externally threaded (fig. 17). Sala further teaches wherein the support is mainly formed of a material which is transparent to x-rays (col. 6, ll. 39-44, col. 8, ll. 5-7, 54-55). It would have been obvious to one having ordinary skill in the art at the time of the invention to make the components of the support out of any known material used in the art since it has been held within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (*In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) MPEP 2144.07).

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEIDI M. EIDE whose telephone number is (571)270-3081. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**Heidi Eide
Examiner
Art Unit 3732**

/Heidi M Eide/
Examiner, Art Unit 3732

9/10/2010

/Cris L. Rodriguez/
Supervisory Patent Examiner, Art Unit 3732